

DRAFT ANNEX H

OPERATIONAL MODE SUMMARY/MISSION PROFILE (OMS/MP) ANNEX

To

PURCHASE DESCRIPTION (PD)

FOR

JOINT LIGHT TACTICAL VEHICLE (JLTV)

VERSION 2.3

15TH APRIL 2010

1. JLTV Mission Profiles

The JLTV Mission Profiles are a description of the operational events and environments that the JLTV is subjected to from the start to the end of its specific missions. Tasks, events, durations, operating conditions, and environmental conditions are identified for each mission phase. It states specific quantities of operation (i.e., hours, rounds, miles, or cycles) for each mission-essential function within the mission. Four aspects of the JLTV profiles are described below: Operational, Threat, Environmental and Terrain.

1.1. Operations Profile

This paragraph outlines three types of profiles in the following tables, Offensive, Defensive and Irregular Warfare. Irregular Warfare (IW) includes combat against personnel who are not members of regular armed forces. These irregular forces will avoid predictable operations and may attempt to blend in with the civilian population as much as possible. These forces can be expected to employ asymmetric means to inflict damage on friendly forces.

A typical offensive mission lasts 96 hours (3 days dynamic, 1 day static), and includes traveling 350-375 miles over a variety of terrain, through any and all environmental and weather conditions.

A typical defensive mission lasts 72 hours (2 days static, 1 day dynamic), and includes traveling 75-100 miles over a variety of terrain, through any and all environmental and weather conditions.

A typical Irregular Warfare mission lasts 96 hours (3 days dynamic, 1 day static), and includes traveling 600 miles over a variety of terrain, through any and all environmental and weather conditions. Table 1 describes the perceived percentages that the JLTV will perform in offensive or defensive postures.

Table 1 Percent of time in offensive/defensive posture.

Scenario	Major Combat Operations (MCO)	MCO (Irregular Warfare)	Surveillance & Reconnaissance Operations (S&RO)
Offense	80	40	80
Defense	20	60	20
Total	100	100	100

Table 2 describes the amount of time the JLTV engine is operating or idle.

Table 2 Vehicle usage (time)

Running Time (In Hours)	Offense	Defense	IW/ Global War on Terrorism (GWOT)
Engine Idle	6	8	6
Maneuver	14	8	14
Total	20	16	20

Table 3 describes the perceived distance that the JLTV would have to travel, and the amount of time the radios are operated in an offensive mission.

Table 3 24 Hour offensive combat mission for JLTV (Combat)

Mode	Static	Dynamic	Average
Proximity support to Mission Task (hrs)	10	12	11
Move	25 miles / 3 hrs	150 miles / 6 hrs	87.5 miles / 4.5 hrs
Continuous Communications (hrs)	20	20	20
Expected %	25%	75%	

Table 4 describes the perceived distance that the JLTV would have to travel, and the amount of time the radios are operated in a defensive mission.

Table 4 24 Hour defensive combat mission for JLTV (Combat)

Mode	Static	Dynamic	Average
Proximity support to Mission Task (hrs)	15	7	11
Move	20 miles / 4 hrs	60 miles / 7 hrs	40 miles / 5.5 hrs
Continuous Communications (hrs)	20	20	20
Expected %	67%	33%	

1.2. Threat Profile

Table 5 describes the perceived threat to the JLTV in a variety of different environments.

Table 5 Threat based on operational environment

(+ High threat, 0 Medium threat, - Low threat)

THREAT	MCO	MCO (Irregular Warfare)	S&RO
Artillery/Mortars	+	+	+
Tank Main Gun	+	-	-
Armored Fighting Vehicles	+	+	-
Small Cal Guns	+	+	+
Rocket Propelled Grenade's	+	+	+
Small Arms	+	+	+
Ground Launch ATGM	+	+	0
Close Air Support	+	-	-
Chemical	+	-	-
Mines	+	+	+
IEDs	+	+	+

1.3. Environmental Profile

Table 6 describes the perceived operating conditions that JLTV will likely experience.

Table 6 Environmental operating conditions

(+ High likelihood, 0 Medium likelihood, - Low likelihood)

ENVIRONMENT	MCO	MCO (Irregular Warfare)	S&RO
Day	+	+	+
Night	+	+	+
Electronic Warfare	+	-	0
Smoke	+	0	0
Haze/Fog	+	0	0
Dust	+	+	+
Rain	+	-	0
Urban	+	+	+
Snow	+	0	0

Table 7 and Table 8 describe the climates in which the JLTV is expected to operate.

Table 7 Operating climates

Climatic Design Type	Daily Cycle	Operational Conditions			Storage And Transit Conditions	
		Ambient Air Temp (°F)	Solar Radiation BPH (BTU/Hr)	Ambient Relative Humidity (%)	Induced Air Temp (°F)	Induced Relative Humidity (%)
Hot	Hot Dry	90-120	0 to 355	3 to 8	91 to 1160	1 to 7
	Hot Humid	88-105	0 to 343	59 to 88	92 to 160	14 to 80
Basic	Constant High Humidity	Nearly Constant 75	Negligible	95 to 100	Nearly Constant 80	95 to 100
	Variable High Humidity	78-95	0 to 307	74 to 100	86 to 145	19 to 75
	Basic Hot	86-110	0 to 355	14 to 44	86 to 145	5 to 44
	Basic Cold	(-3 To -25)	Negligible	Tending Toward Saturation	(-13 to -28)	Tending Toward Saturation
Cold	Cold	(-35 to -50)	Negligible	Tending Toward Saturation	(-35 to - 50)	Tending Toward Saturation
Severe Cold	Severe Cold	(-60 and Below)	Negligible	Tending Toward Saturation	(-60)	Tending Toward Saturation

Table 8 Climatic conditions

Climate Type	Wartime	Peacetime
Hot	20 %	14 %
Basic	60 %	80 %
Cold	15 %	5 %
Severe Cold	5 %	1 %

1.4. Terrain Profile

Table 9 describes the perceived percentage the JLTV would have to travel on various types of terrain.

Table 9 Terrain profile

Movement Terrain	Wartime	Peacetime
Primary Road	30%	50 %
Secondary Road	30 %	40 %
Cross-country & trails	40 %	10 %

Table 10 provides the estimated percentage of travel conducted on various types of road surfaces.

Table 10 Combat demands

Road Movements (% traveled)	Offense	Defense
Primary Roads	30	30
Secondary Roads	30	30
Cross Country & trails	40	40
Total	100	100